GOVERNMENT OF INDIA
POWER
LOK SABHA

UNSTARRED QUESTION NO:742
ANSWERED ON:21.07.2016
Pollution by Power Plants
Nayak Shri B.V.

Will the Minister of POWER be pleased to state:

(a) whether the level of pollution is increasing in the country due to high emission of Carbon Dioxide (CO2) from thermal power plants, if so, the details thereof during the last three years, Statewise and year-wise and the steps taken/ being taken by the Union Government to check it;

(b) whether it is also a fact that the coal based power plants in the country need
highest amount of water in the world due to which those plants have been placed at the lowest level in the grading; and

(c) if so, the steps taken/being taken by the Union Government for their improvement?

Answer

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER,
COAL, NEW & RENEWABLE ENERGY AND MINES

(SHRI PIYUSH GOYAL)

(a) : As per Central Electricity Authority (CEA) data, the total CO2 emissions from Indian power sector during last three years are as under: -

Year Total CO2 Emission in Million Tonnes of CO2 Specific CO2 emission of Coal based Plants in Kg/kWh
2012-13 696.3 1.04
2013-14 727.4 1.03
2014-15 805.4 1.01

Carbon di-oxide (CO2) emissions from thermal power plants, State-wise and Year −wise are Annexed.

The steps taken for reducing CO2 emissions from thermal power plants include- adoption of more efficient Supercritical Technology for thermal power generation resulting in less specific coal consumption (Kg/KWh) and lower CO2 emissions; phased retirement of in-efficient and old thermal power generation units (capacity of about 4740.64 MW has already been retired as on 30.06.2016); a target of 175 GW capacity from renewable energy sources by 2022; facilitating Public Sector Utilities to replace old inefficient coal based thermal units with supercritical units by formulating a policy on automatic transfer of Coal linkage to more efficient units.

As a result, the specific CO2 emissions from these plants have reduced from 1.04 kg/kWh to 1.01 kg/kWh during last three years.

(b) & (c) : The consumptive water requirement of coal based power plant depends upon various factors, such as, quality of raw water, type of condenser cooling system, ash content of coal, type of ash disposal system, quantum of ash utilization and waste water management etc. Coal based power stations in India require relatively higher quantity of consumptive water because of high ash content of Indian coals and high ambient temperature conditions.

The Government has taken various steps to reduce the water consumption in thermal generation, which include -use of closed cycle cooling water system and high level of Cycle of Concentration (COC) to reduce the water requirement; installation of Ash Water Recirculation System(AWRS); Installation of Dry fly ash collection system/ High Concentration Slurry System(HCSS); installation of Waste water treatment &Zero water discharge system. Govt. of India has also notified new Tariff policy on 28.01.2016 wherein it is mandated that the thermal power plant(s) located within 50 km radius of sewage treatment plant of Municipality/ local bodies/ similar organization shall, in the order of their closeness to sewage treatment plant, mandatorily use treated sewage water produced by these bodies.

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